



## Fast Pfu DNA Polymerase

Fast Pfu DNA polymerase	100 U (20ul)
10×reaction buffer with Mg <sup>2+</sup>	600 μl

### **For research use only**

Cat No: YT1603

Conc: 5u/ μl

Store at -20°C

### **Description :**

Fast Pfu DNA polymerase is a generating form of Pfu DNA polymerase from pyrococcus furiosus. This product is thermostable with both 5' to 3' DNA polymerase and 3' to 5' exonuclease activity. Thus its fidelity of DNA synthesis is much higher than that of taq DNA polymerase. The enzymes is ideal for a variety of applications requiring high-fidelity DNA synthesis by the polymerase chain reaction(PCR).Successful PCR using Pfu DNA polymerase is readily performed requiring only slight modifications from PCR protocol enclosed in this instruction sheet.

### **Unit Definition:**

One unit is defined as the amount of enzyme required to catalyze the incorporation of 10nmol of dNTPs into acid-insoluble material in 30minutes at 75°C.

\*Maximum amplification for simple samples is 8 kb .

### **Protocol:**

#### **Reaction mixture**

10x reaction buffer with Mg <sup>2+</sup>	5 μl
dNTP mixture(2.5 nmol/L each)	4 μl
Primer 1 (10μmol/L)	1 μl
Primer 2 (10μmol/L)	1 μl
Template DNA	variable
Pfu DNA polymerase 5u/μl	0.25-0.5μl
ddH <sub>2</sub> O	Up to 50 μl

#### **Recommended thermal cycling conditions**

Step	Temprature (°C)	Time(seconds)	Numbers
Initial denaturation	94	180	1
Denaturation	94	35	37 Cycles
Annealing	56-65	15	
Extension	72	15 sec/kb	
Final Extension	72	300	1

### **Stability**

It will Keep Activity more than two years stored at -20(°C).

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